



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/674,175      | 09/29/2003  | Bryan K. Casper      | 80107.041US1        | 1947             |

7590 08/09/2006

LeMoine Patent Services, PLLC  
c/o PortfolioIP  
P.O. Box 52050  
Minneapolis, MN 55402

EXAMINER

TRAN, PABLO N

ART UNIT PAPER NUMBER

2618

DATE MAILED: 08/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/674,175

Applicant(s)

CASPER ET AL.

Examiner

Pablo N. Tran

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 17-30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I, claims 1-16, in the reply filed on 05/30/06 is acknowledged.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Henry, Jr. (6,832,075).

As per claim 1, Henry, Jr. disclose a semiconductor comprising a transmitter circuit (fig. 2/no. 30) to output a plurality of substantially constant signal levels, a receiver circuit (fig. 2/no. 40) to receive the plurality of substantially constant signal levels, and a control mechanism (fig. 2/no. 26) coupled to the receiver to calibrate the receiver (fig. 5/no. 114, fig. 6/no. 128, col. 6/ln. 19-27).

Art Unit: 2618

As per claim 2, Henry, Jr. disclose the transmitter circuit and receiver circuit are on the integrated circuit die (fig. 2/no. 24, col. 4/ln. 6-9).

As per claim 3, Henry, Jr. disclose at least one signal trace coupled between an output of the transmitter circuit and an input of the receiver circuit (fig. 2, fig. 4).

As per claim 4, Henry, Jr. disclose the at least one signal trace is at least partially off the integrated circuit die (fig. 3-4).

As per claim 5, Henry, Jr. disclose a loopback circuit at least partially off the integrated circuit die (fig. 3-4).

As per claim 6, Henry, Jr. disclose at least one signal trace comprises a first signal trace coupled between the output of the transmitter circuit and the loopback circuit (fig. 4, col. 5/ln. 17-65).

As per claim 7, Henry, Jr. disclose at least one signal trace comprises a second signal trace coupled between the loopback circuit and the input of the receiver circuit (fig. 4, col. 5/ln. 17-65).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2618

5. Claims 8-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henry, Jr. (6,832,075) in view of Haycock (2001/0024477) and further in view of Wei et al. (2004/0234010).

As per claims 8-9 and 11, as stated above in claim 1, Henry, Jr. further disclose a loopback circuit couple an output node of the transmitter circuit to an input node of the receiver circuit (fig. 3/no. 60, fig. 4/no. 60). The communication apparatus of Henry, Jr. does not utilize a pre-emphasis circuit. However, such utilization of the circuit is well known in the art, as taught by Haycock (fig. 9/no. 35). Therefore, it would have been obvious to one of ordinary skill in the art to utilize such circuitry, as taught by Haycock, for the communication apparatus of Henry, Jr. in order to match the characteristics of the transmission lines and also to reduce passive components.

The modified apparatus of Henry, Jr. and Haycock is silent about utilization of a variable offset comparator. However, such is well known in the art, as taught by Wei et al. (fig. 2). Therefore, it would have been obvious to one of ordinary skill in the art to provide such circuitry, as taught by Wei et al., to the modified apparatus of Henry, Jr. and Haycock in order to allow a receiver to more accurately receive higher frequency and/or data-rate communications over communication paths.

As per claims 10 and 16, as stated above in claim 11, the modified apparatus of Henry, Jr. and Haycock and further in view of Wei et al. further disclose a plurality of variable offset comparators coupled in parallel (see Wei et al. fig. 2).

As per claim 12, as stated above in claim 11, the modified apparatus of Henry, Jr. and Haycock and further in view of Wei et al. further disclose a control mechanism

Art Unit: 2618

(see Henry, Jr., fig. 2) to influence operation of the transmitter circuit, receiver circuit, and loopback circuit.

As per claim 13, as stated above in claim 11, the modified apparatus of Henry, Jr. and Haycock and further in view of Wei et al. further disclose a processor (see Henry, Jr., fig. 2).

As per claim 14, as stated above in claim 11, the modified apparatus of Henry, Jr. and Haycock and further in view of Wei et al. further disclose a state machine (see Henry, Jr., fig. 2).

As per claim 15, as stated above in claim 11, the modified apparatus of Henry, Jr. and Haycock and further in view of Wei et al. further disclose the transmitter circuit outputs substantially constant amplitude signals using the pre-emphasis circuit (see Haycock, col. 1/ln.53-60).

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for

Art Unit: 2618

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-directauspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

**PABLO N. TRAN**  
**PRIMARY EXAMINER**

August 5, 2006

A handwritten signature in black ink, appearing to be 'P. Tran', with a large, sweeping horizontal stroke above the name.

AU2618